

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 35, 36, 62 and 66 have been amended.

Claims 60, 61 and 63 to 65 have been canceled without prejudice.

Listing of Claims

Claims 1-34 (cancelled).

Claim 35 (currently amended): An air conditioning system for heating and/or cooling a passenger compartment of a motor vehicle, comprising a compressor, the compressor powering at least two air conditioning circuits at the same time, a first circuit having a first heat exchanger, a second circuit having a second heat exchanger, flow through the first heat exchanger returning to the first circuit and the flow through the second circuit passing through the second heat exchanger.

Claim 36 (currently amended): The air conditioning system of claim 35, wherein the at least two air conditioning circuits include a first circuit for cooling supply air for the passenger compartment and a second circuit for heating supply air for the passenger compartment.

Claim 37 (previously presented): The air conditioning system of claim 36, wherein the first circuit can be used for cooling at the same time the second circuit is used for heating.

Claim 38 (previously presented): The air conditioning system of claim 35, wherein the compressor includes a high-pressure side and a low pressure side, the at least two air conditioning circuits located downstream of the high pressure side, and wherein a branch point is provided between the high pressure side and the at least two air conditioning circuits.

Claim 39 (previously presented): The air conditioning system of claim 36, wherein the compressor includes a high-pressure side and a low pressure side, the first and second circuits located downstream of the high pressure side, and wherein a branch point is provided between the high pressure side and the first and second circuits, and wherein an expansion valve is located downstream of the branch point in the second circuit.

Claim 40 (previously presented): The air conditioning system, of claim 39, wherein a check valve is located downstream of the branch point in the first circuit.

Claim 41 (previously presented): The air conditioning system of claim 36, wherein the compressor includes a high-pressure side and a low pressure side, the at least two air conditioning circuits located downstream of the high pressure side, and wherein a branch point is provided between the high pressure side and the first and second circuits, wherein a check valve is located downstream of the branch point in the first circuit.

Claim 42 (previously presented): An air conditioning system for heating and/or cooling a passenger compartment of a motor vehicle comprising a compressor, the compressor having a low pressure side and a high pressure side, a valve device located downstream of the compressor on the high-pressure side, the valve device splitting a high-pressure refrigerant flow from the compressor into two streams.

Claim 43 (previously presented): The air conditioning system of claim 42, wherein the two streams comprise a first refrigerant flow and a second refrigerant flow, and wherein the first refrigerant flow is used for cooling supply air for the passenger compartment and, at the same time, the second refrigerant flow is used for heating supply air for the passenger compartment.

Claim 44 (previously presented): The air conditioning system of claim 43, wherein the first refrigerant flow is coupled to a refrigeration circuit and the second refrigerant flow is coupled to a heating circuit, and wherein, on the high-pressure side, the second refrigerant flow uses the high refrigerant temperature resulting from compression in the compressor to

heat the supply air of the passenger compartment.

Claim 45 (previously presented): The air conditioning system of claim 44, wherein the high temperature of the second refrigerant flow is used to heat a cooling water circuit via a heat exchanger.

Claim 46 (previously presented): The air conditioning system of claim 45, wherein the cooling water circuit heats the supply air of the passenger compartment via another heat exchanger.

Claim 47 (previously presented): The air conditioning system of claim 45, wherein a throttling device or an expansion valve is located downstream of the heat exchanger.

Claim 48 (previously presented): The air conditioning system of claim 47, wherein a check valve is located downstream of the throttling device or the expansion valve; the check valve preventing refrigerant from flowing from the refrigeration circuit into the heating circuit.

Claim 49 (previously presented): The air conditioning system of claim 48, wherein downstream of the check valve, the heating circuit and the refrigeration circuit are coupled to the low pressure side of the compressor.

Claim 50 (previously presented): The air conditioning system of claim 44, wherein the high temperature of the second refrigerant flow is used for heating the supply air of the passenger compartment via a heat exchanger.

Claim 51 (previously presented): The air conditioning system of claim 50, wherein a throttling device or an expansion valve is located downstream of the heat exchanger.

Claim 52 (previously presented): The air conditioning system of claim 51, wherein another heat exchanger that reheats the refrigerant with cooling water is located downstream

of the throttling device or the expansion valve.

Claim 53 (previously presented): The air conditioning system of claim 52, wherein a check valve is located downstream of the another heat exchanger; the check valve preventing refrigerant from flowing from the refrigeration circuit into the heating circuit.

Claim 54 (previously presented): The air conditioning system of claim 53, wherein downstream of the check valve, the heating circuit and the refrigeration circuit are coupled to the low pressure side of the compressor.

Claim 55 (previously presented): The air conditioning system of claim 44, wherein the heating circuit prevents window fogging.

Claim 56 (previously presented): The air conditioning system of claim 45 wherein the cooling water circuit comprises a bypass added in a water circuit of a cooling water circuit of an internal combustion engine, the bypass being able to be opened and closed.

Claim 57 (previously presented): The air conditioning system of claim 51, wherein the another heat exchanger reheats the refrigerant with heat from ambient air, or heat from engine parts or engine block parts, or heat from the exhaust tract.

Claim 58 (previously presented): The air conditioning system of claim 52, wherein a volume flow of the cooling water is controllable by a thermostatic control valve in order to control the heat flow.

Claim 59 (previously presented): The air conditioning system of claim 49, wherein the compressor is a variable-stroke compressor including a compression chamber, and , upon turning on the air conditioning system, the supply to the compression chamber in the variable-stroke compressor is essentially shut off in order to remove liquid refrigerant from the compressor.

Claim 60 to 61 (canceled).

Claim 62 (currently amended): The air conditioning system of claim 49, ~~wherein~~
further comprising a valve reduces the second refrigerant flow when less heat is needed to
heat the passenger compartment, ~~the second refrigerant flow is correspondingly reduced.~~

Claim 63 to 65 (canceled).

Claim 66 (currently amended): The air conditioning system of claim 54, further
comprising a valve controlling the flow of the engine cooling water ~~wherein heat input~~ after
throttling in the heating circuit ~~is reduced~~ to reduce the heat impact if the passenger
compartment is to be cooled when the engine cooling water is warm.

Claim 67 (previously presented): The air conditioning system of claim 36, wherein waste
heat of hot gas is used for heating.

Claim 68 (previously presented): The air conditioning system of claim 42, wherein gases
on the high pressure side reach 120 C during operation of the compressor.

Claim 69 (previously presented): The air conditioning system of claim 42, wherein the
refrigerant is CO₂.